Lamoine Conservation Commission

"Windpower 101"

July 14, 2010

A Presentation by Sandy Cohen of Peninsula Power to the Lamoine Conservation Commission.

Folks from Lamoine and nearby gathered at the Lamoine Town Hall on July14th to hear a talk by Sandy Cohen, an active volunteer with Peninsula Power, a proposed wind energy project by the towns on the Blue Hill Peninsula.

The search for alternative sources for electricity is underway in earnest. Maine does not have a great solar energy resource. Wind, tidal power and stream turbines have more potential for economical development in Maine.

Peninsula Power (www.peninsulapower.org) is aligned with the Island Institute, and has begun to fundraise for the $65,000 needed for a feasibility study of a $10 million dollar wind power development. The feasibility study will look at sites, utility business structure, technology and available wind. The current focus is on a Christy Hill site, which is essentially a 700 acre blueberry barren with no home within ¾ of a mile. The University of Maine will loan the project an anemometer, which will be installed on a 120 foot tower for a year to gauge the amount of available wind.

The plan is to build two or three 1.5 megawatt turbines, because the permitting studies required for a project generating more than 5 megawatts are considered prohibitive. Existing technology with a track record in Europe will be used, which involves 132 foot long blades like those that have been moving through Maine in recent months. Each tower supports 70 tons and the tips of the blades are moving at 200 miles per hour. The stresses are substantial and a tower has a life span of approximately 20 years.

Bangor Hydro-Electric Company will buy the electricity for the Maine basic rate. The organizing group is exploring differential pricing with those who are affected by the towers and the noise they generate paying less for their electricity. The proposed site is three miles from the Brooksville Substation and an access road and "extension cord" would be required.

The noise experts working with this project are the same as those dealing with the Vinalhaven project, which has some neighbors very unhappy about the noise. The engineers are working on a number of mitigation strategies, including shutting down towers at wind speeds determined to create the most noise. In Vinalhaven the decision was made to buy two homes.

Mr. Cohen made the point that these impacts increase the attractiveness of offshore wind on floating platforms developed by the Norwegians. Some platforms are operating 200 miles from land ("You need a long extension cord.")

He also raised the issue of stroboscopic flicker as the sun comes through a turbine at a specific angle, and is known to have medical effects. There are also potential neurological effects of the low frequency vibrations. Mr. Cohen, whose professional training was as an experimental psychologist working on research into children's brains, noted that we can hear frequencies of 18 cycles per second, but we can feel frequencies down to 12 cycles per second. These vibrations going into the concrete base of turbines and into the bedrock are the actual cause of the emerging "wind turbine syndrome." Its not clear at this time if there are mitigation strategies for this hazard.

There were many spirited questions and the question period had to be forcibly shut down by the authorities (Chairman Pulver). Most of the questions and comments focused on either the need to make sure that wind power projects were prevented from creating a noise hazard, or the need to knowledgably develop wind and other forms of power, as petroleum-based technologies also have huge negative effects world-wide, even if few of those effects are regularly observed along the Maine Coast.